CLAIMS

1. Test system consisting of cells expressing a *cytochrome P450 2D6 (hCYP2D6)* allele in a heterologous manner wherein at least three *P450 2D6* alleles are expressed in said test system.

2. Test system according to claim 1 wherein said at least three *P450 2D6* alleles correspond to the most frequent allele types in a population.

3. Test system according to claim 1 wherein said test system expresses at least 5 functional *hCYP2D6* alleles in a heterologous manner.

4. Test system according to claim 3 wherein the alleles *hCYP2D6*1, *2, *9, *10* and **17* are expressed.

5. Test system according to any one of claims 1 to 4 wherein said cells are Chinese hamster lung fibroblasts or cells derived therefrom.

6. Test system according to claim 5 wherein said cells are V79 cells.

7. Test system according to claim 6 wherein said cells are the cell lines V79MZh2D6*1, V79MZh2D6*2, V79MZh2D6*9, V79MZh2D6*10 and V79MZh2D6*17 deposited on February, 15, 2000, at the DSMZ-Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH under the accession numbers DSM ACC2446, DSM ACC2447, DSM ACC2448, DSM ACC2449 and DSM ACC2450.

8. Test system according to any of the claims 1 to 7 wherein said cells express cDNA.

9. Kit comprising the test system according to any of the claims 1 to 8.

10. Use of the test system according to any of the claims 1 to 8 for the study of the gene-dependent toxicity of metabolites.

11. Use according to claim 10 wherein said metabolites are drugs.

12. Use of the test system according to any of the claims 1 to 8 for determining a toxic, mutagenic or cancerogenous effect of compounds.

13. Use according to any one of claims 10 to 12 wherein the cells expressing human cytochrome P450 2D6 are contacted with the substance to be tested.

14. Method for screening of substances with respect to their metabolization by human cytochrome P450 2D6 wherein the cells of the test system according to any of the claims 1 to 8 are contacted with a substance and the metabolic product is measured.

15. Method for the detection of novel *P450 2D6* alleles wherein said method comprises the heterologous expression of the allele in question in a cell, testing the cells expressing the allele in question with respect to the cytochrome P450 2D6-dependent metabolism of one or more compounds and comparison of the metabolism of the cells to the metabolism of cells of the test system according to any one of claims 1 to 8.

16. Method for the quantification of the cytochrome P450 content wherein said method comprises the solubilization of cytochrome P450 by means of the non-ionic detergent emulgen 913, centrifuging the solubilizate and measurement using CO difference spectra.

17. Method according to claim 16 wherein said method comprises the following steps:

(a) preparation of cell homogenate;
(b) addition of emulgen 913 to the cell homogenate;
(c) removing insoluble material;
(d) determination of the reduced spectrum;
(e) saturation with carbon monoxide;
(f) measurement of the CO/reduced spectrum;
(g) evaluation of the cytochrome P450 content by means of the spectra.

18. Method according to claim 16 or 17 wherein emulgen 913 is added in a final concentration of 0.25% (w/v).